Abstract of the Disclosure

A monopulse radar system generates elevation and azimuth difference monopulse estimates of the location of targets in each range cell, where the target may be either a single or plural target, each of which is made up of multiple scattering sources. Each azimuth-elevation estimate is based on a transmitted pulse or burst at a given frequency, different from other frequencies in a set of pulses or bursts. A test statistic is generated for each set. The statistic relates to the shape in an azimuth-elevation plane of the cluster of estimates. The test statistic is compared with a threshold to decide whether a single target or plural targets exist in the range cell.